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BIOLOGISTS MAKE AERIAL STUDY OF FAR NORTH'S DUCK BREEDING GROUNDS

The most intensive aerial study ever made on the Far North's waterfowl breeding grounds was conducted this summer in Canada's Northwest Territories and on eastern Alaska's Arctic coastline, the Fish and Wildlife Service's Branch of Wildlife Research disclosed today.

Service flyway biologist Robert H. Smith, accompanied by the National Audubon Society's Robert P. Allen, flew 14,272 miles over tundra, woodland, and delta breeding grounds — much of it uncharted territory.

Their twin-motored amphibious Gruman "Widgeon" covered the Athabaska Delta, the Freat Slave Lake parklands, the valley and delta of the Mackenzie River, the Yukon Territory's Old Crow Flats, and the Arctic coastline from Point Barrow, Alaska, east to Bathurst Inlet in Canada.

In surveying almost 42,200 square miles, the biologists found waterfowl populations that compared favorably with those in southern Canada. "The greater percentage" of the ducks observed, however, were non-game birds — the slow-flying or fisheating scoters, old-squaws, and king eiders. Mallards and pintails, the most important game species in the United States, made up a small percentage of the ducks in the area.

The Fish and Wildlife Service declares that vast Far North duck breeding grounds still remain unstudied. These regions may be populated by "different population consistencies" than those observed this summer by biologists Smith and Allen. A comprehensive estimate of Far North duck populations can be determined only by broadening the forthcoming surveys to include other regions in northeastern Alaska and Canada's Northwest Territories, the Service explains.

Density of ducks seen in this summer's survey ran from 56.2 birds per square mile on the Yukon Territory's Old Crow Flats, to only 3.9 birds per square mile in the upland tundra country south of Point Barrow, Alaska. Scoters comprised 48 percent of the total number of ducks found on the Flats. The rest: baldpates, scaups, pintails, golden-eyes, old-squaws, and canvas-backs. Fifty-four percent of the ducks sighted on the upland tundra south of Point Barrow were old-squaws and 9 percent king eiders. The rest were game birds: pintails and scaups.

On the coastal tundra south of Point Barrow, biologists Smith and Allen found a density of 5.7 ducks per square mile. Of these, 53 percent were old-squaws, 27 percent king eiders, and 2 percent scoters. Pintails and scaups made up the rest of the population.

The biologists' count showed a density of 12.4 ducks per square mile on the transition area between the tundra and forest, south of Canada's Eskimo Lake. Seventy-nine percent were scoters. The rest: scaups, baldpates, pintails, and golden-eyes.

A density of 35.4 ducks per square mile was found on the upland tundra in the Eskimo Lake region. Of these, 83 percent were scoters, and 5 percent old-squaws. Scaups, pintails, baldpates, and red-breasted mergansers comprised the rest.

In sampling the coastal tundra in the Eskimo Lake region, the biologists recorded a density of 11.5 ducks per square mile, of which 36 percent were old-squaws, 35 percent king eiders, and 15 percent scoters. The others were pintails and scaups.

On the Mackenzie River's wooded delta area, a density of 27.7 ducks per square mile was evident. Thirty-nine percent were scoters. The others: scaups, bald-pates, mallards, pintails, golden-eyes, shovelers, red-breasted mergansers, and green-winged teals.

Density of ducks on the Mackenzie River's treeless delta was 25.2 birds per square mile, the biologists found. Scoters comprised 28 percent of the total population. The rest; pintails, scaups, mallards, and shovelers.

Flying at an altitude of only 100 feet, the two biologists sampled 468.1 square miles by the "transect method" (a linear distance of 1872.4 miles). Transect lines were made at random, but because of the homogeneous nature of each habitat type studied, the biologists believe they obtained a representative sampling. All waterfowl were recorded by species by an observer on each side of the plane on an eighthmile strip. Thus, an actual count was gotten on a quarter-mile strip. By computing ground speed on each heading, the biologists interpreted the results into the number of waterfowl per square mile.

As the first statistical sampling of the Far North's duck breeding grounds, the data obtained this summer by biologists Smith and Allen will be of great value for comparative purposes next year and in future years, the Fish and Wildlife Service believes. Because of the lack of equipment, previous intensive samplings of Canada's waterfowl breeding areas were confined to the region south of the Great Slave Lake.

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